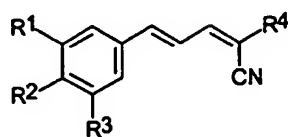


Claims:

1. A compound of Formula I, or a salt, solvate, or hydrate thereof:



I

wherein

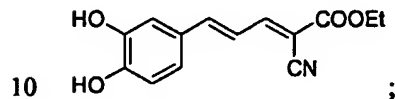
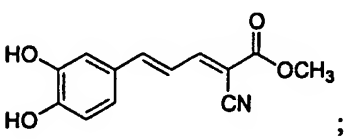
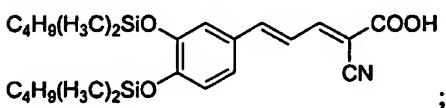
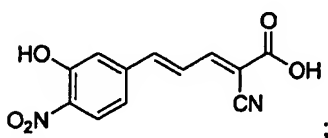
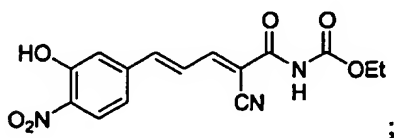
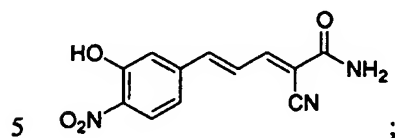
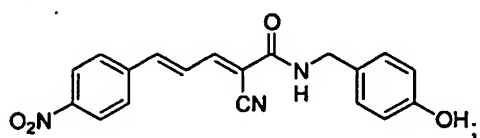
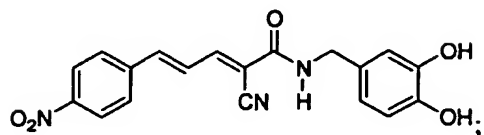
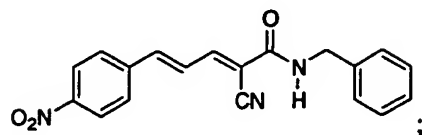
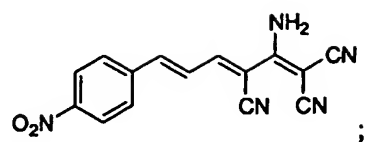
- 5 R^1 and R^2 are each independently selected from H, OH, C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkylCO₂, NH₂, NH- C_{1-6} alkyl, N(C_{1-6} alkyl)(C_{1-6} alkyl), C_{1-6} alkyl(C=O)NH, C_{1-6} alkyl(C=O)N(C_{1-6} alkyl), SH, S- C_{1-6} alkyl, O-Si(C_{1-6} alkyl)(C_{1-6} alkyl)(C_{1-6} alkyl), NO₂, CF₃, OCF₃ and halo, or R^1 and R^2 together represent O- C_{1-6} alkyl-O, thereby forming a ring;
- 10 R^3 is selected from H, OH, C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkylCO₂, NH₂, NH- C_{1-6} alkyl, N(C_{1-6} alkyl)(C_{1-6} alkyl), C_{1-6} alkyl(C=O)NH, C_{1-6} alkyl(C=O)N(C_{1-6} alkyl), SH, S- C_{1-6} alkyl, O-Si(C_{1-6} alkyl)(C_{1-6} alkyl)(C_{1-6} alkyl), NO₂, halo and CH₂-S-(CH₂)_n Ar;
- R^4 is selected from C(X)R⁵, SO₃Ar, NH₂, NH- C_{1-6} alkyl, N(C_{1-6} alkyl)(C_{1-6} alkyl),
- 15 P(O)(OH)₂, P(O)(OC C_{1-6} alkyl)₂, and C(NH₂)=C(CN)₂;
- X is selected from O, S, NH and N- C_{1-6} alkyl;
- R^5 is selected from NH₂, OH, NH(CH₂)_pAr, NH(CH₂)_pOH, (CH₂)_pOC C_{1-6} alkyl, C_{1-6} alkyl, C_{1-6} alkoxy, NHNH₂, NHC(O)NH₂, NHC(O) C_{1-6} alkoxy, N-morpholino and N-pyrrolidino; and
- 20 Ar is an aromatic or heteroaromatic group, unsubstituted or substituted with 1-4 substituents, independently selected from OH, C_{1-6} alkyl, C_{1-6} alkoxy, NH₂, NH- C_{1-6} alkyl, N(C_{1-6} alkyl)(C_{1-6} alkyl), SH, S- C_{1-6} alkyl, NO₂, CF₃, OCF₃ and halo;
- n is 0 to 4; and
- 25 p is 1-4.

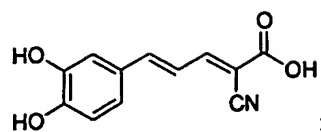
2. The compound according to claim 1, wherein R^1 and R^2 are each independently selected from H, OH, C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} alkylCO₂, NH₂, NH-

C₁₋₄alkyl, C₁₋₄alkyl(C=O)NH, C₁₋₄alkyl(C=O)N(C₁₋₄alkyl), SH, S-C₁₋₄alkyl, O-Si(C₁₋₄alkyl)(C₁₋₄alkyl)(C₁₋₄alkyl), NO₂, CF₃, OCF₃ and halo, or R¹ and R² together represent O-C₁₋₆alkyl-O, thereby forming a ring.

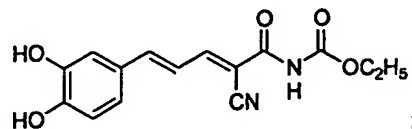
3. The compound according to claim 2, wherein R¹ and R² are each independently selected from the group consisting H, OH, OCH₃, CH₃CO₂, O-Si(CH₃)₂(^tBu), S-Me, SH, CH₃CONH, CH₃CONCH₃, and NO₂.
4. The compound according to claim 3, wherein R¹ and R² are both OH or R¹ and R² are both OCH₃.
5. The compound according to claim 4, wherein R¹ is OCH₃ and R² is OH.
6. The compound according to claim 1, wherein R³ is selected from H, OH, C₁₋₄alkyl, C₁₋₄alkoxy, C₁₋₄alkylCO₂, NH₂, NH-C₁₋₄alkyl, N(C₁₋₄alkyl)(C₁₋₄alkyl), C₁₋₄alkyl(C=O)NH, C₁₋₄alkyl(C=O)N(C₁₋₄alkyl), SH, S-C₁₋₄alkyl, NO₂ and halo.
7. The compound according to claim 6, wherein R³ is selected from H, OH, OCH₃, CH₃CO₂, SH, SMe, NO₂, CH₃CONH, CH₃CONCH₃, and halo.
8. The compound according to claim 1, wherein R¹, R², and R³ are each independently selected from H, C₁₋₄alkylCO₂, C₁₋₆alkyl(C=O)NH, and C₁₋₆alkyl(C=O)N(C₁₋₆alkyl), provided that at least one of R¹, R², and R³ is not hydrogen.
9. The compound according to claim 1, wherein R⁴ is selected from C(X)R⁵ and C(NH₂)=C(CN)₂.
10. The compound according to claim 9, wherein R⁴ is C(X)R⁵.

11. The compound according to claim 10, wherein X is selected fromselected from O and S.
12. The compound according to claim 10, wherein R⁵ is selected fromselected from NH₂, OH, NH(CH₂)_pAr, NH(CH₂)_pOH and C₁₋₄alkoxy.
- 5 13. The compound according to claim 12, wherein p is 1-3.
14. The compound according to claim 13, wherein R⁵ is selected fromselected from NH₂, OH, NH(CH₂)_pAr, NH(CH₂)_pOH and OCH₃.
15. The compound according to clam 14, wherein p is 1-2.
16. The compound according to claim 1, wherein Ar is an unsubstituted
10 phenyl group or a phenyl group substituted with 1-4 substituents optionally selected fromselected from OH, C₁₋₆alkyl, C₁₋₆alkoxy, NH₂, NH-C₁₋₆alkyl, N(C₁₋₆alkyl)(C₁₋₆alkyl), SH, S-C₁₋₆alkyl, NO₂, CF₃, OCF₃ and halo.
17. The compound according to claim 14, wherein Ar is an unsubstituted phenyl group or a phenyl group substituted with 1-4 substituents optionally selected
15 fromselected from OH, C₁₋₆alkyl, C₁₋₆alkoxy, NH₂, NH-C₁₋₆alkyl, N(C₁₋₆alkyl)(C₁₋₆alkyl), SH, S-C₁₋₆alkyl, NO₂, CF₃, OCF₃ and halo.
18. The compound according to any of claims 16 and 17, wherein Ar is an unsubstituted phenyl group or phenyl group substituted with 1-2 substituents optionally selected fromselected from OH, C₁₋₄alkyl, C₁₋₄alkoxy, NH₂, NH-C₁₋₄alkyl,
20 N(C₁₋₄alkyl)(C₁₋₄alkyl), SH, S-C₁₋₄alkyl, NO₂, CF₃, OCF₃ and halo.
19. The compound according to claim 18, wherein Ar is an unsubstituted phenyl group or phenyl group substituted with 1-2 substituents optionally selected from OH, OCH₃, NH₂, NHCH₃, N(CH₃)₂, SH, SCH₃, CF₃, OCF₃ and halo.
20. A compound selected from:

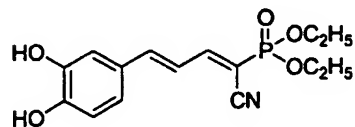




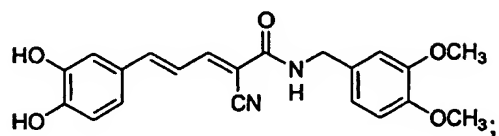
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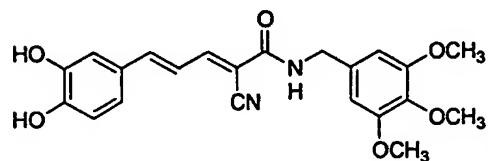
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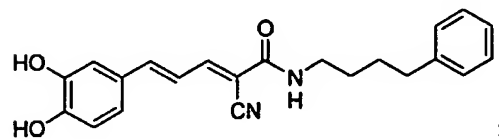


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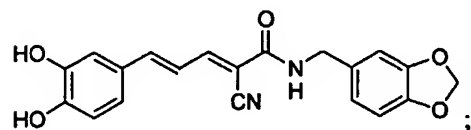


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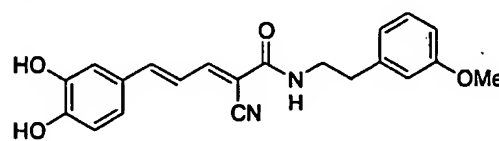
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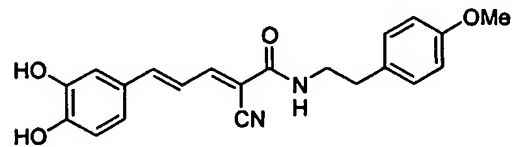
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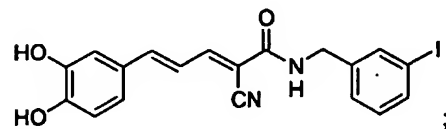
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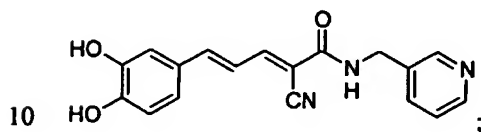
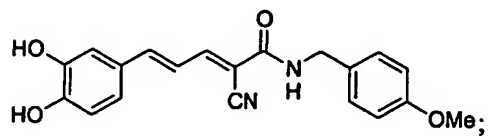
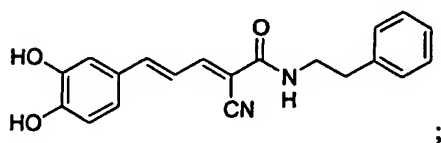
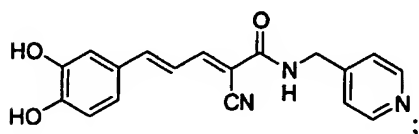
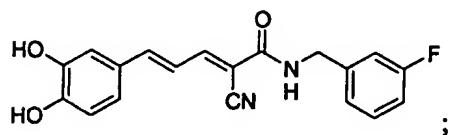
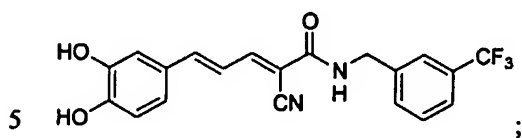
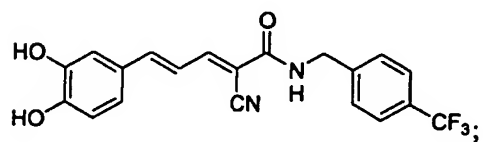
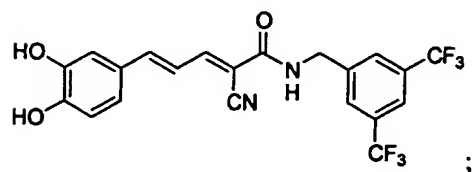
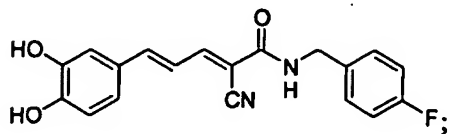
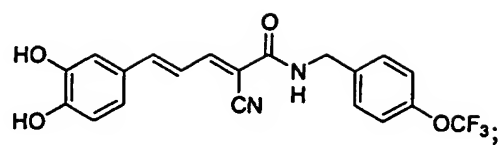


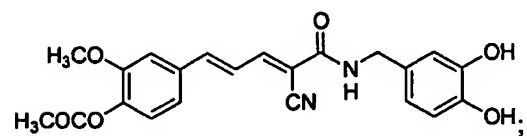
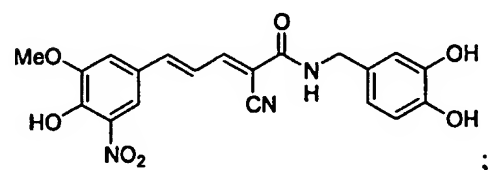
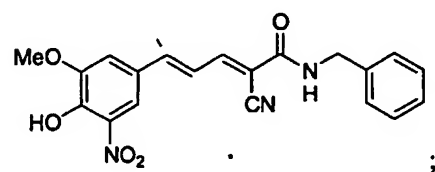
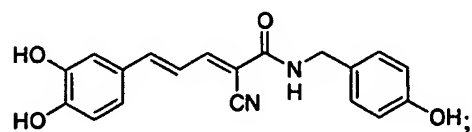
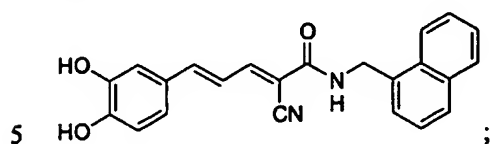
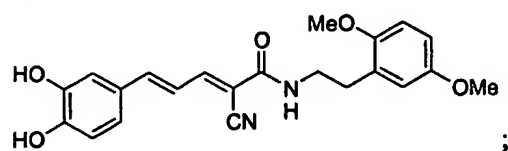
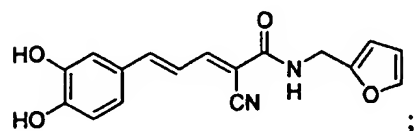
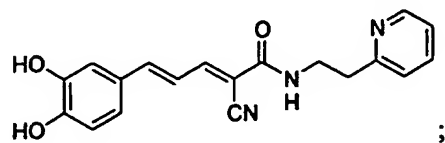
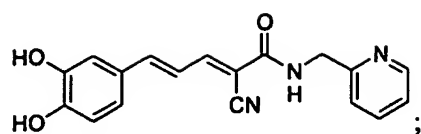
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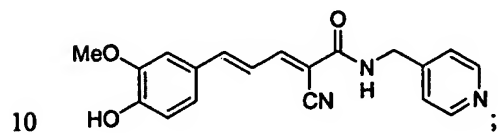
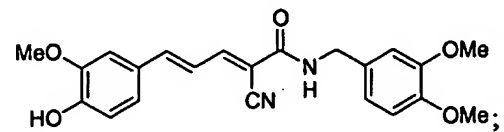
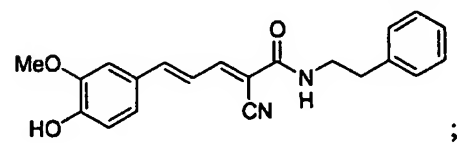
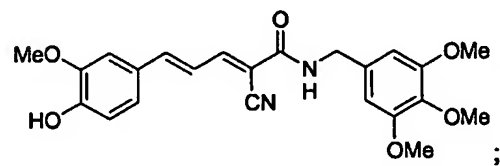
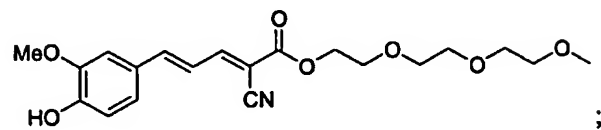
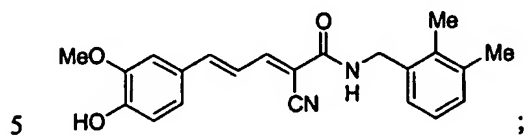
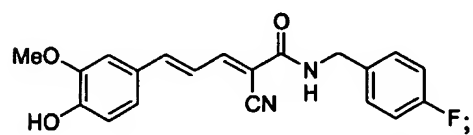
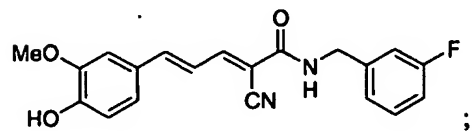
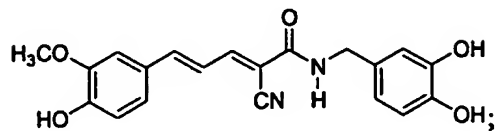
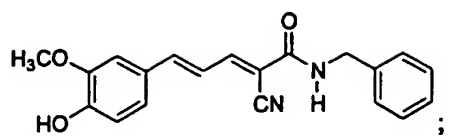


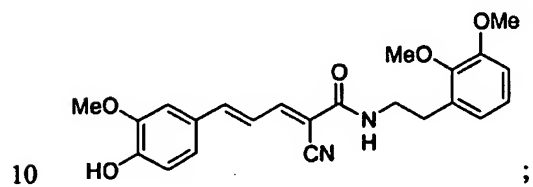
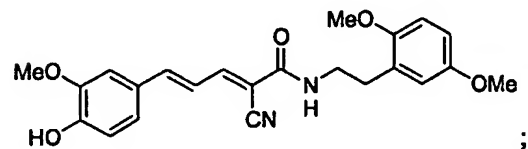
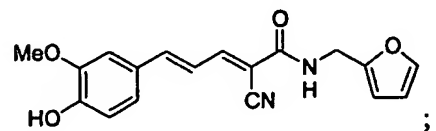
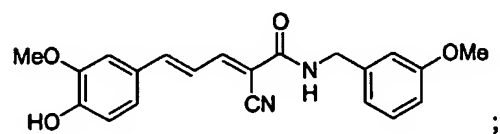
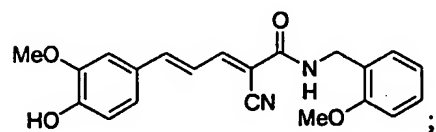
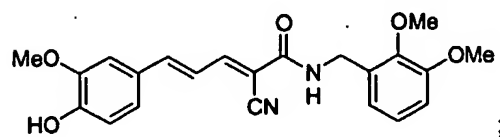
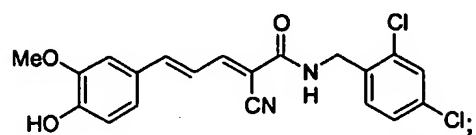
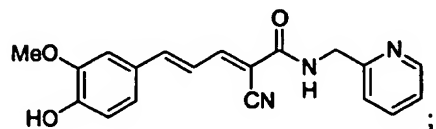
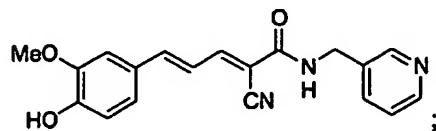
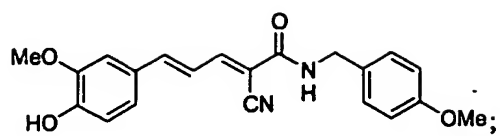
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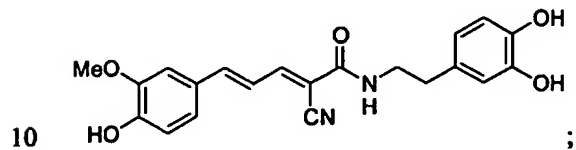
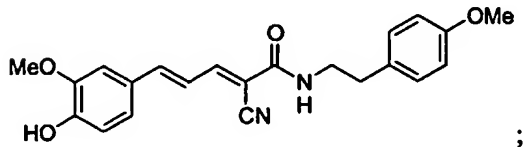
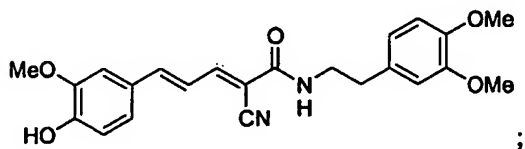
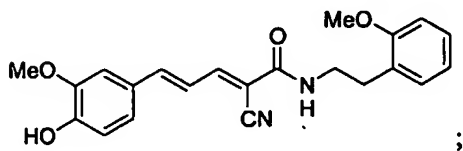
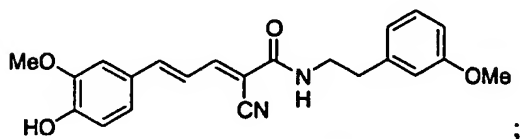
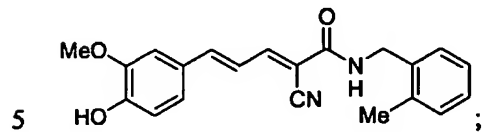
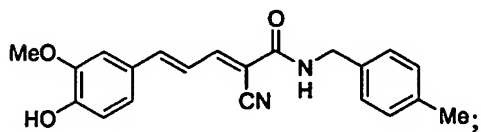
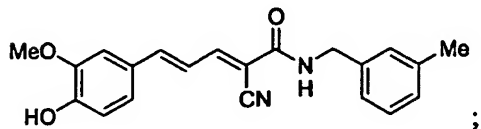
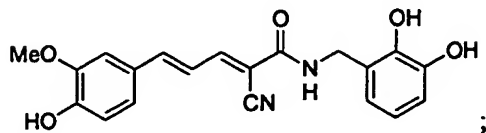
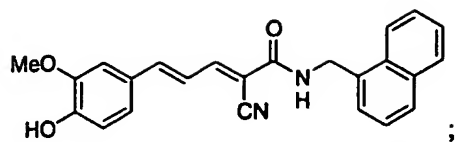
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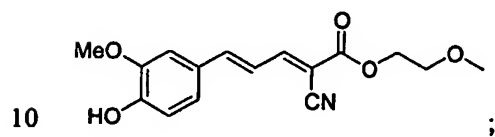
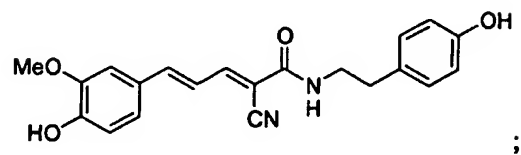
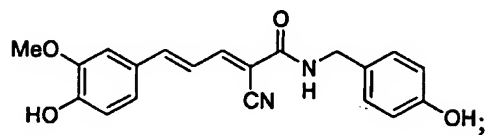
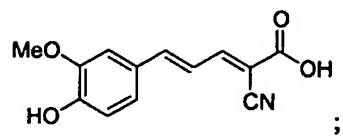
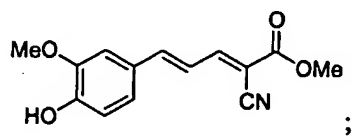
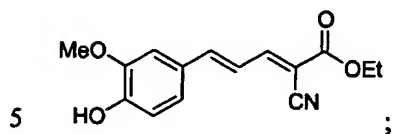
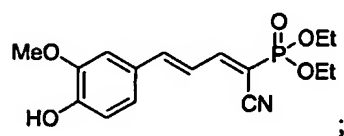
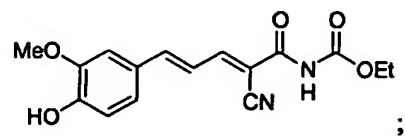
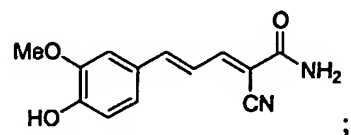
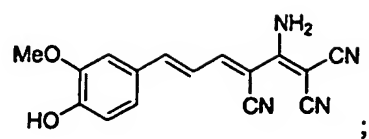


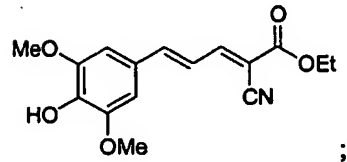
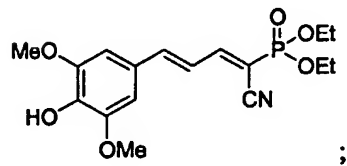
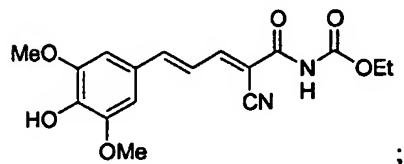
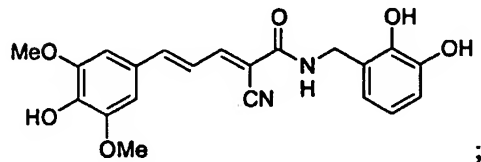
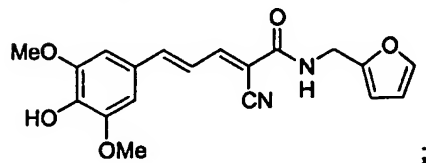
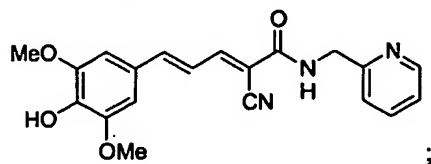
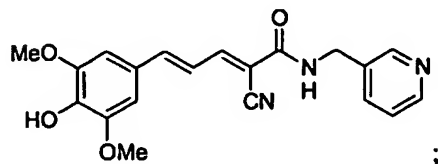
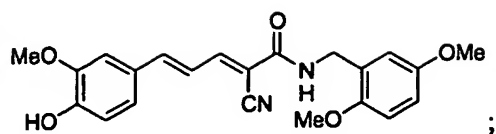


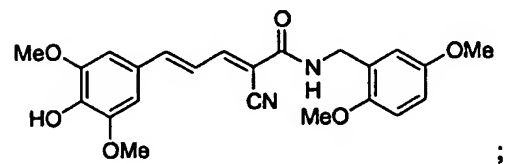
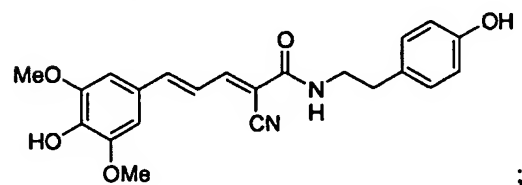
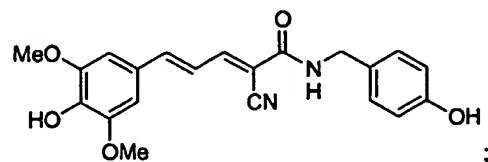
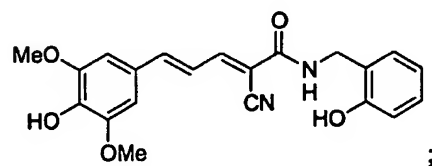
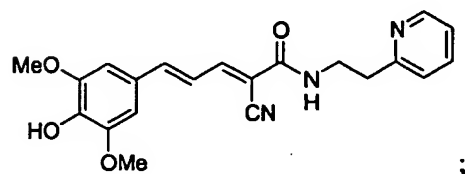
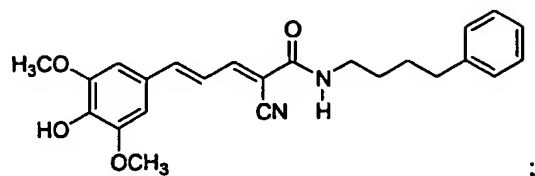
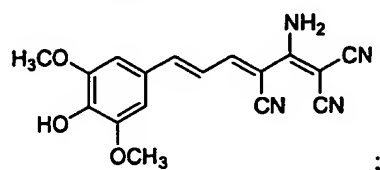
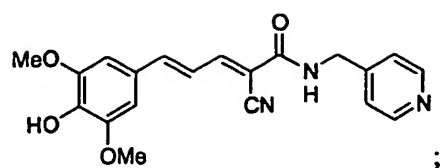


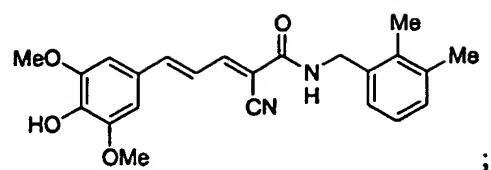




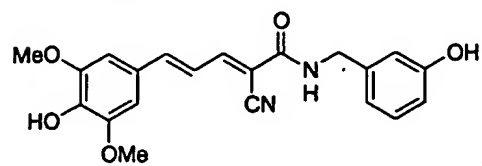




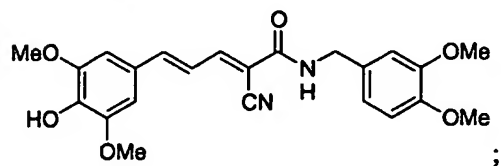
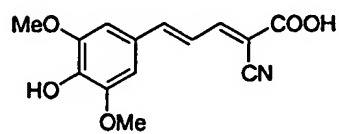




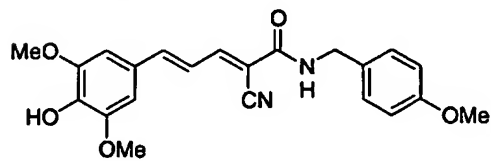
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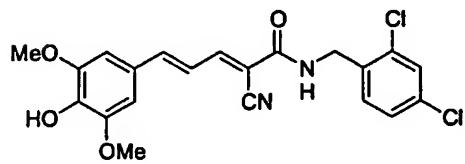


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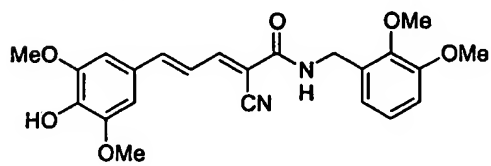


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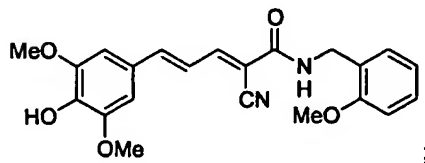
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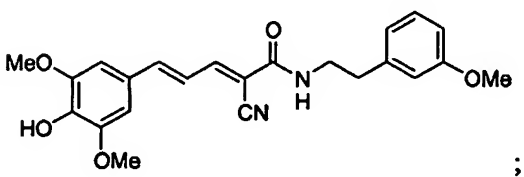
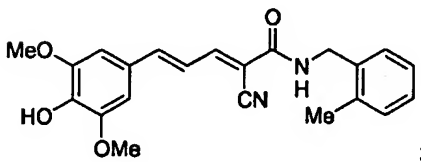
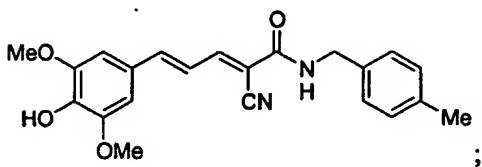
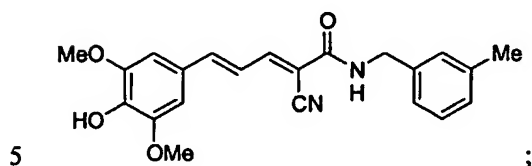
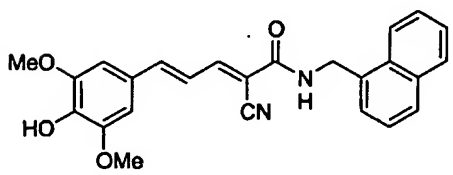
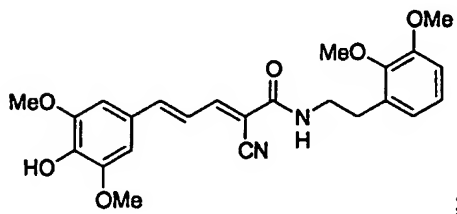
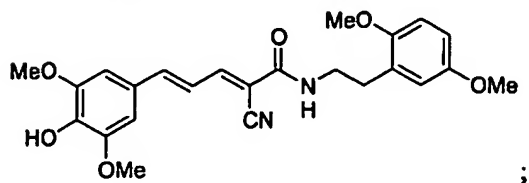
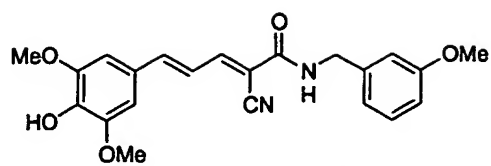
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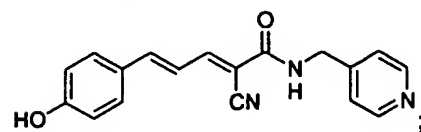
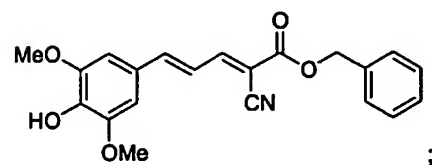
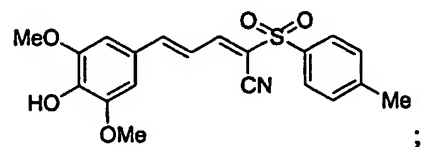
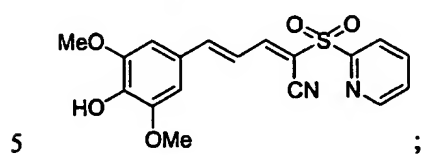
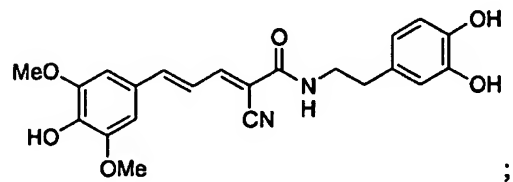
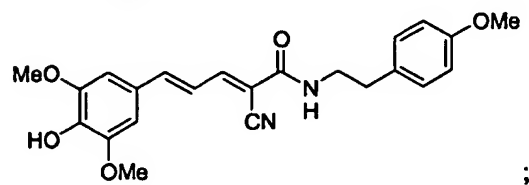
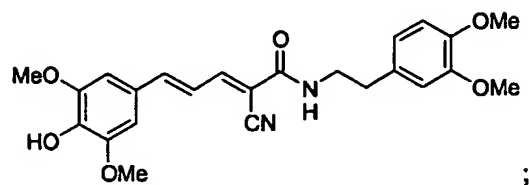
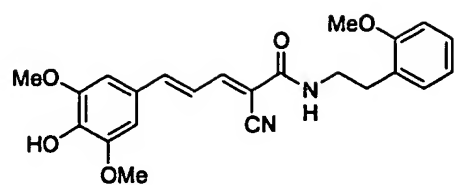


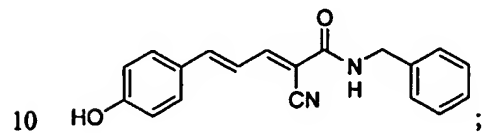
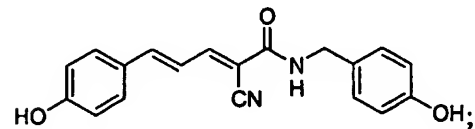
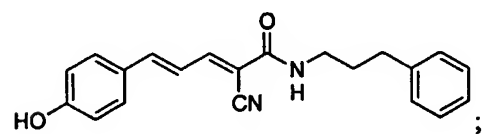
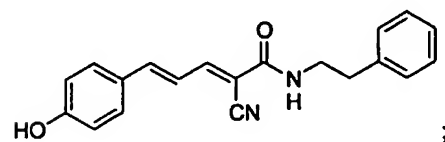
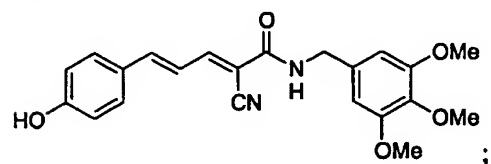
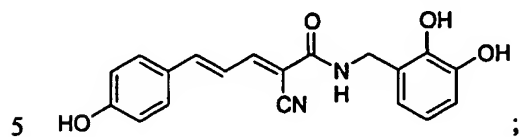
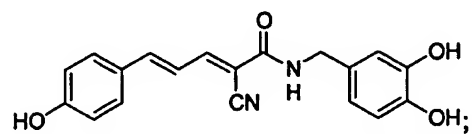
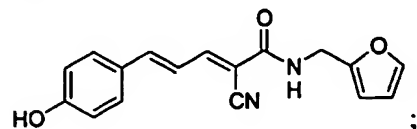
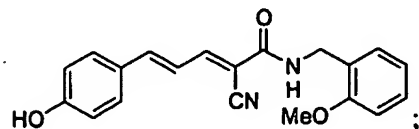
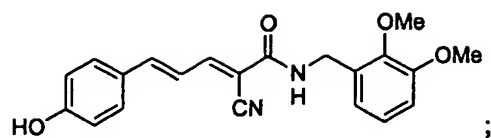
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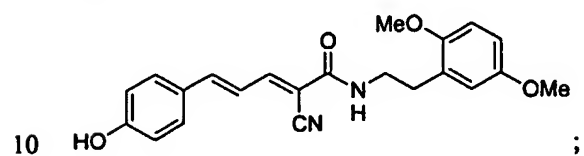
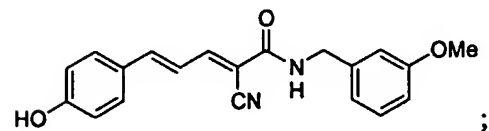
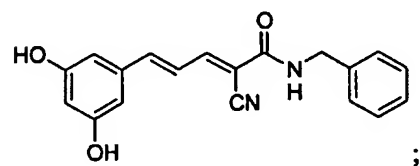
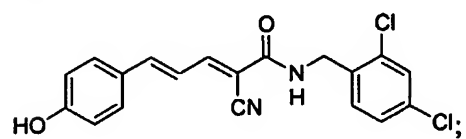
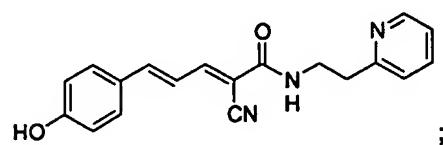
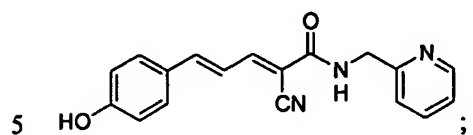
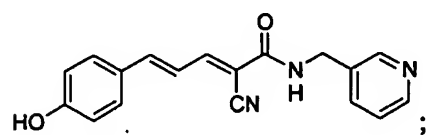
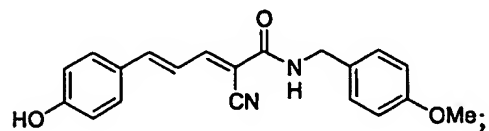
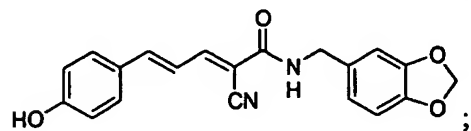
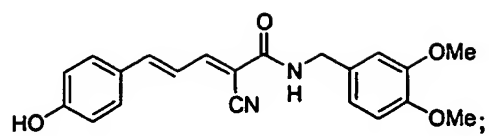


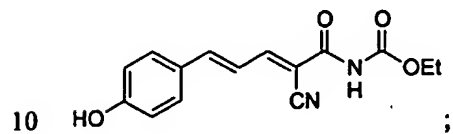
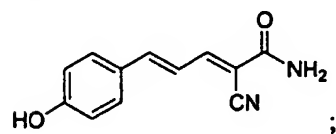
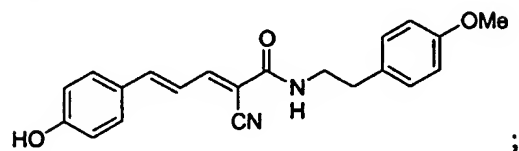
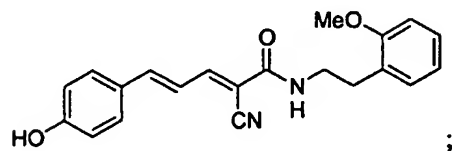
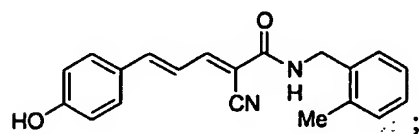
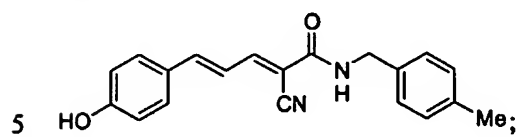
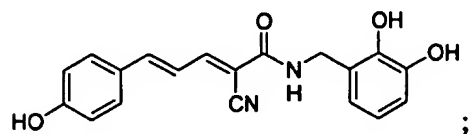
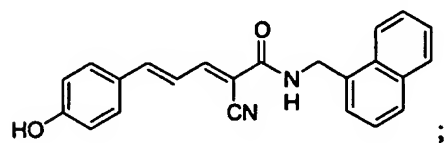
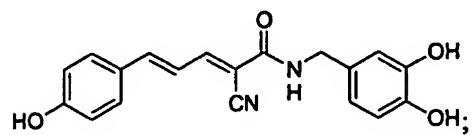
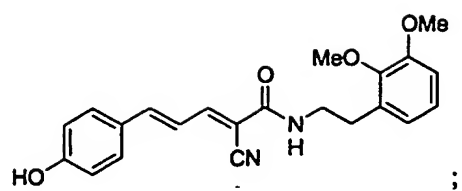
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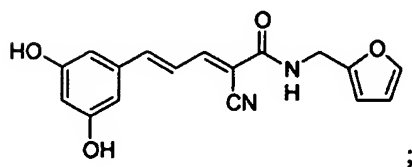
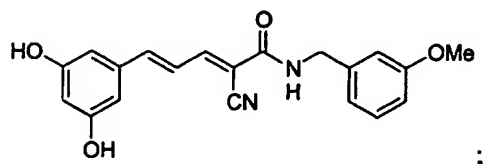
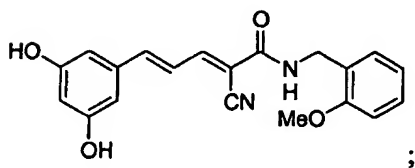
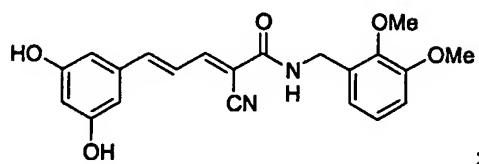
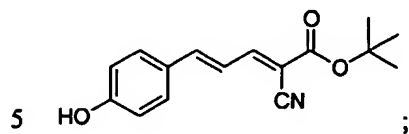
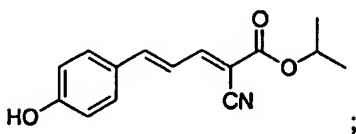
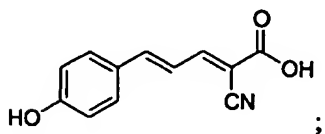
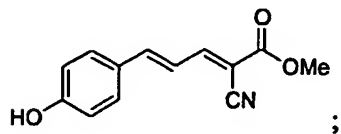
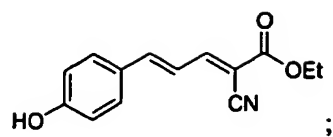


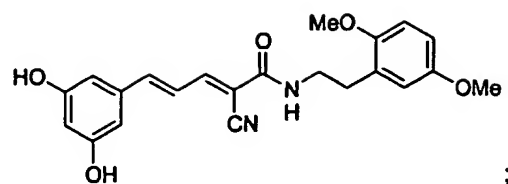




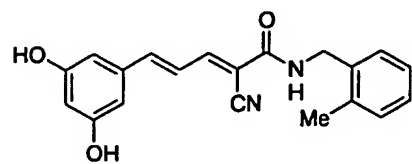




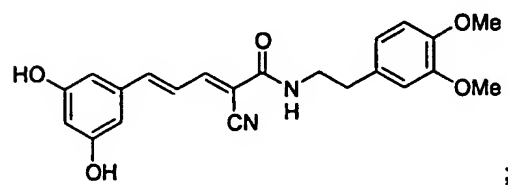




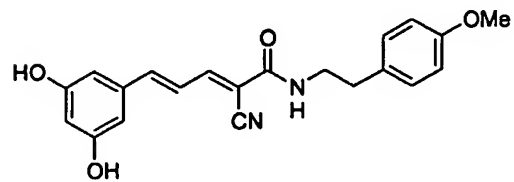
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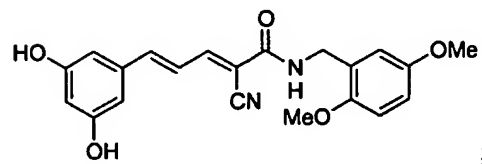
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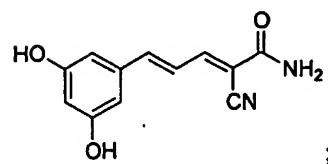


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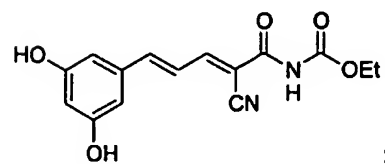


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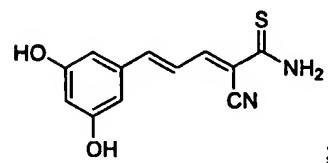
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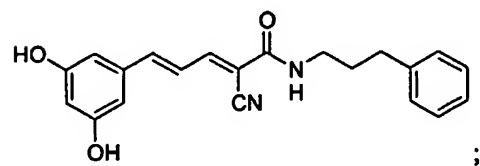
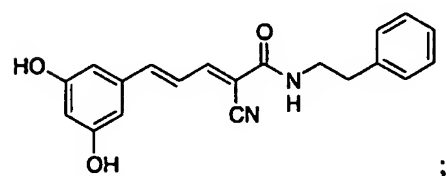
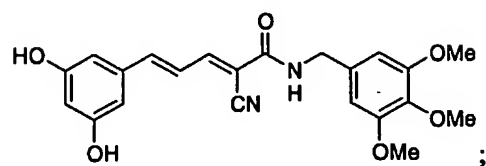
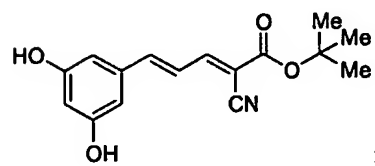
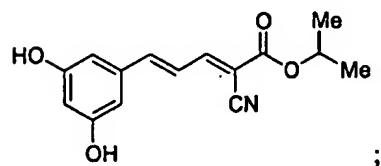
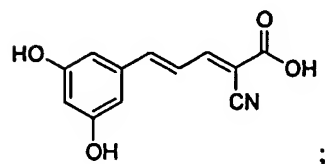
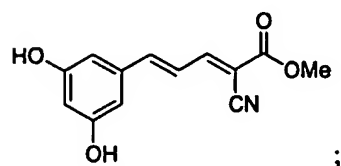
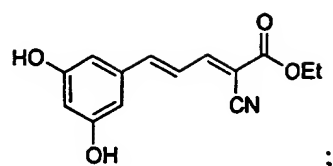
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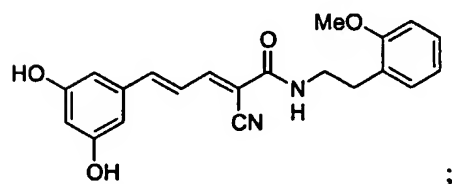
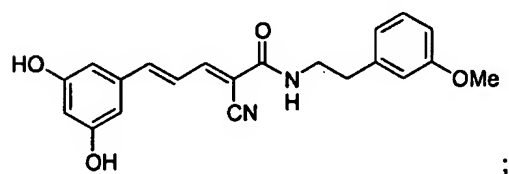
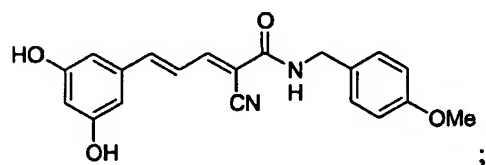
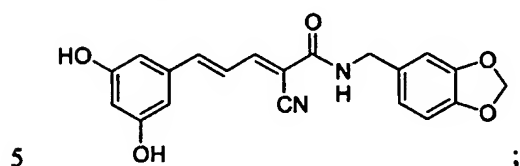
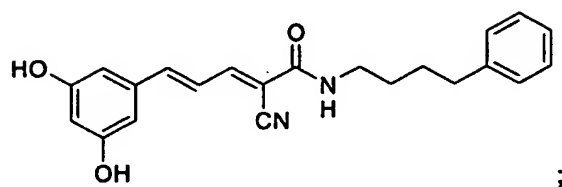
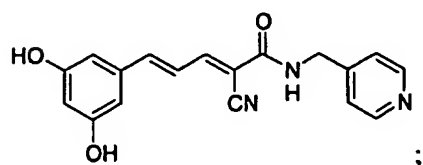
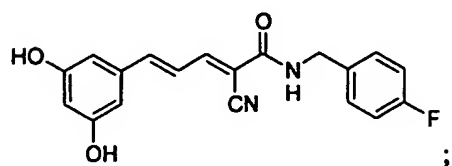
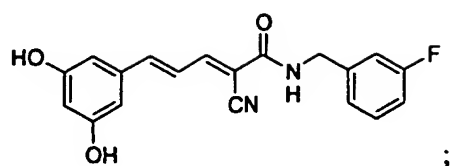


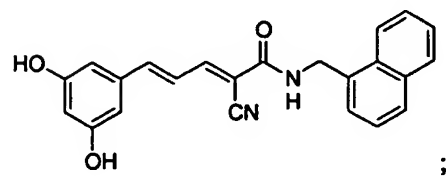
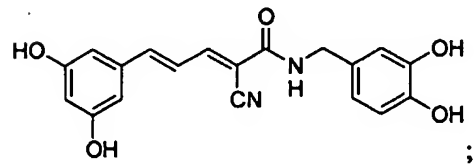
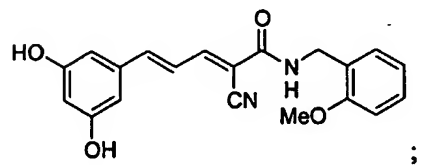
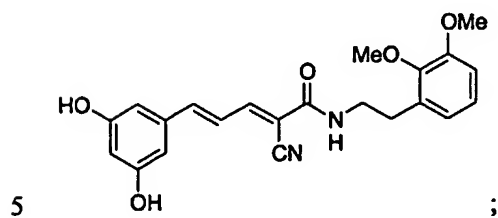
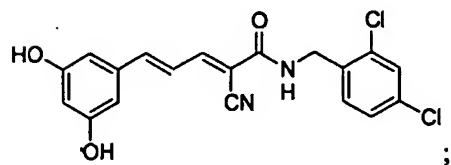
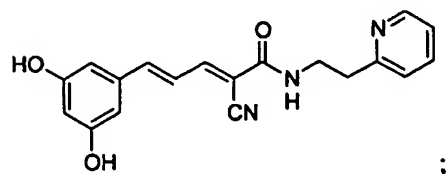
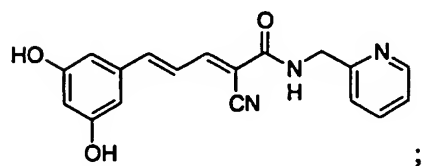
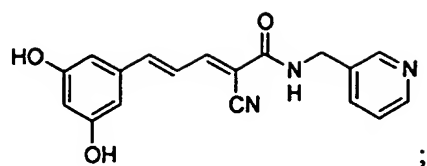
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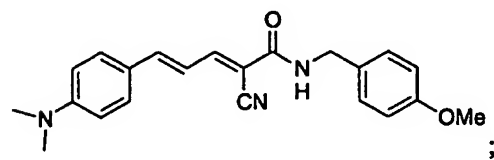
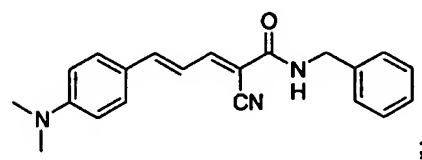
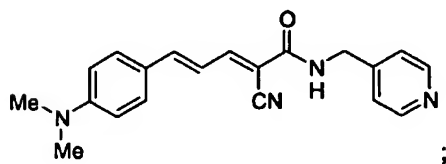
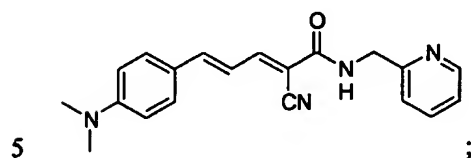
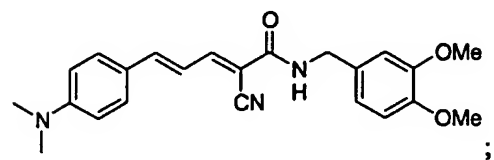
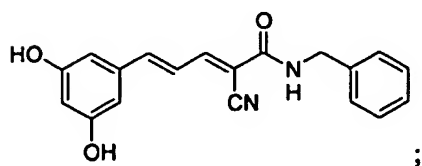
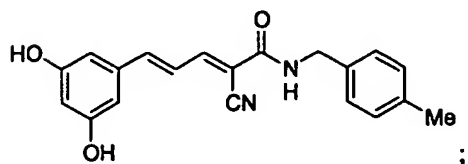
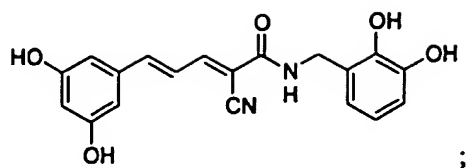


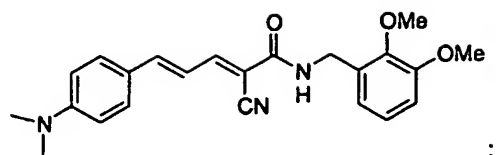
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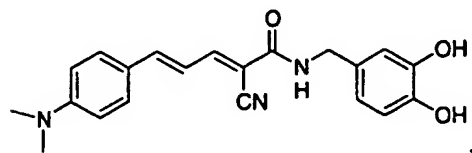




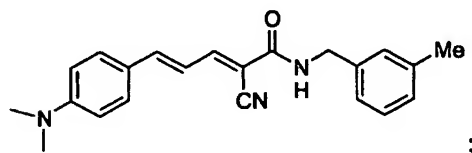




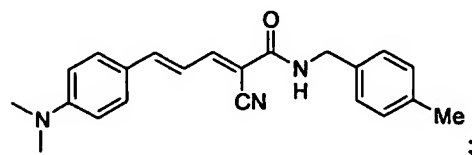
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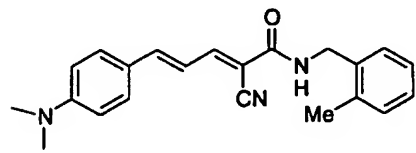
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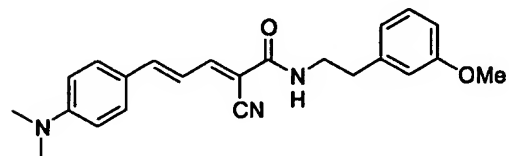


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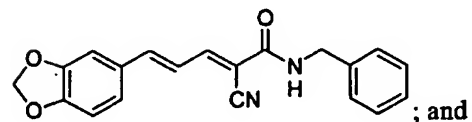


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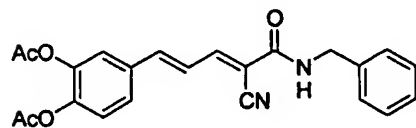
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; and



21. A composition comprising a compound according to any one of
 10 claims 1 to 20 in admixture with a pharmaceutically acceptable diluent or carrier.

22. A use of a compound capable of modulating cell proliferation according to any one of claims 1 to 20 to prepare a medicament to modulate cell proliferation.
23. A use of a compound capable of inhibiting cell proliferation
5 according to any one of claims 1 to 20 to inhibit cell proliferation.
24. A use of a compound capable of inhibiting cancer cell proliferation according to any one of claims 1 to 20 to inhibit cancer cell proliferation.
25. A use of a compound according to any one of claims 1 to 20 to treat cancer.
- 10 26. A use according to claim 24 or 25 wherein said cancer is a hematopoietic cell cancer.
27. A use according to claim 24 or 25 wherein said cancer is a leukemia, a lymphoma, a myeloma or a carcinoma.
28. A use according to claim 27 wherein said leukemia is acute
15 lymphoblastic leukemia, Philadelphia+ leukemia, Philadelphia- leukemia, acute myelocytic leukemia, chronic myeloid leukemia, chronic lymphocytic leukemia or juvenile myelomonocyte leukemia.
29. A use according to claim 27 wherein said leukemia is acute lymphoblastic leukemia.
- 20 30. A method of modulating cell proliferation comprising administering an effective amount of a compound capable of modulating cell proliferation according to any one of claims 1 to 20 or a composition according to claim 21 to a cell or animal in need thereof.

31. A method of inhibiting cell proliferation comprising administering an effective amount of a compound capable of inhibiting cell proliferation according to any one of claims 1 to 20 or a composition according to claim 21 to a cell or animal in need thereof.
- 5 32. A method of inhibiting cancer cell proliferation comprising administering an effective amount of a compound capable of inhibiting cancer cell proliferation according to any one of claims 1 to 20 or a composition according to claim 21 to a cell or animal in need thereof.
- 10 33. A method of treating cancer comprising administering an effective amount of a compound capable of inhibiting cancer cell proliferation according to any one of claims 1 to 20 or a composition according to claim 21 to a cell or animal in need thereof.
34. A method according to claim 32 or 33 wherein said cancer is a hematopoietic cell cancer.
- 15 35. A method according to claim 32 or 33 wherein said cancer is a leukemia, a lymphoma, a myeloma or a carcinoma.
- 20 36. A method according to claim 35 wherein said leukemia is acute lymphoblastic leukemia, aggressive Philadelphia+ leukemia, acute myelocytic leukemia, chronic myeloid leukemia, chronic lymphocytic leukemia or juvenile myelomonocyte leukemia,
37. A method according to claim 35 wherein said leukemia is acute lymphoblastic leukemia.